SOUTH - LC
NTA, GA

SUMMARY OF FINDINGS AND APPROACH

STATUS GREEN - COMPLE
- IN PROGRESS
RED - IN PROGRESS

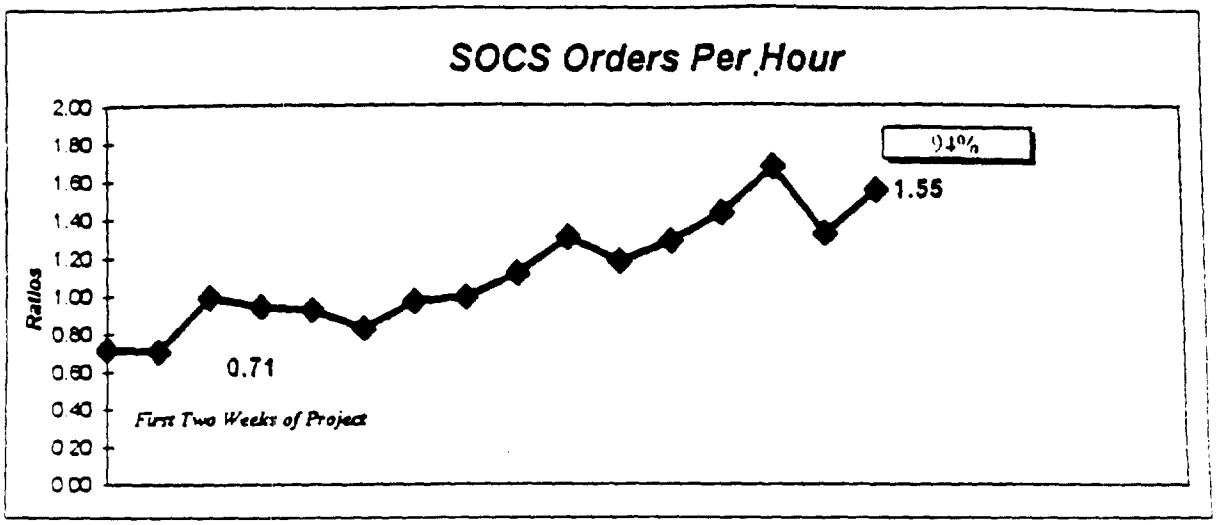
Updated June 20, 1997 Week 14 of 22

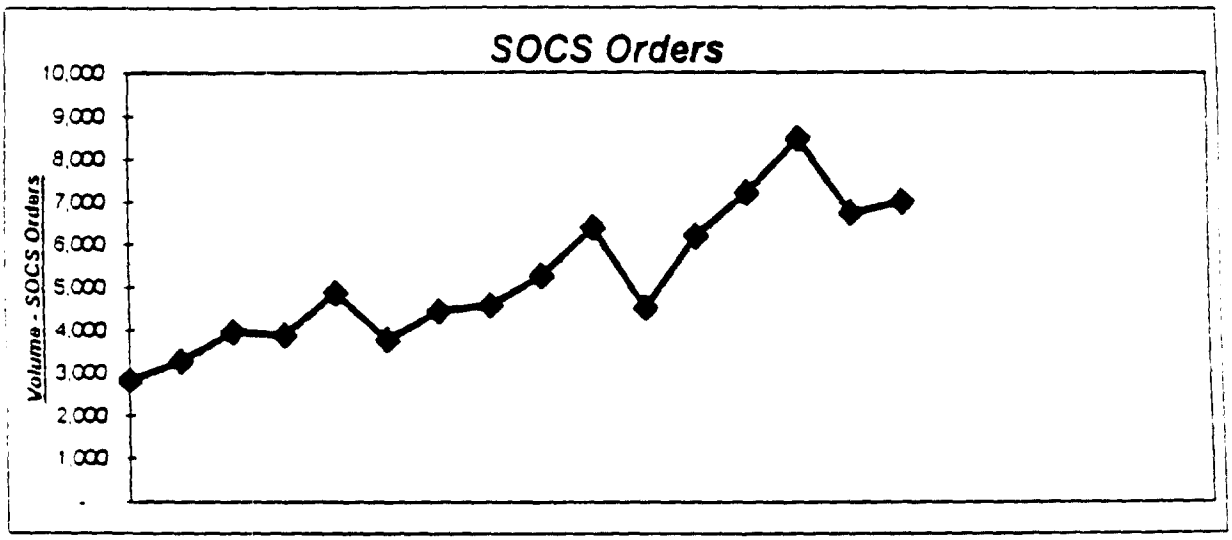
AREAS	FINDINGS	PROPOSALS	PHASES FOR DELIVERABLES: QUICK RESULTS PHASE I	MAIN INSTALLATION PHASE II	ADJUST & FOLLOW-UP PHASE III
T, OPERATING	ELEMENTS EXITS, BUT REQUIRES	N SIGN AND INSTALL ELEMENTS			UPGRADE FORECAST
EM (MOS)	UPGRADES				FORMALIZE PROCEDURES
PROCESS	NEEDS BETTER DEFINITION, AND SIMPLER	INSTALL PREDICTABILITY OF EXECUTION			ALIGN PROCESS FLOWS AND PROCEDURES
	NEEDS TO INTERNALIZE UP GRADES	AND KNOW HOW TO REPEAT PROCESS			INSTALL PROCESS WITH LCSC MGMT
OYEE SKILLS	INCOMPLETE TRAINING - DELIVERY & CONTENT	LL THE GAPS IN TRAINING			IMPLEMENT COACHING AND DEVELOPMENT PROCEDURES
	LACKS ON THE FLOOR SUPPORT AND EVALUATION	LIVER FUNCTIONAL REPS			IDENTIFY AND SCHEDULE REMEDIAL TRAINING REQUIREMENTS
EMENT	LACKS STRUCTURED PARTICIPATION	VELOP BEHAVIOR MODEL			INSTALL CONTINUOUS DEVELOPMENT PROGRAM
IOR		VALUATE AND INSTALL			FOCUS ON PERFORMANCE
EMENT	PASSIVE IN ASSIGNMENT / FOLLOW UP	ROACTIVE ENGAGEMENT			INSTALL WEEKLY TEAM MEETINGS
DES					EMPLOYEE INVOLVMENT IN PROBLEM SOLVING
Y / SERVICE	NO EFFECTIVE MEASURES	EVELOP TESTING PROCESS			IMPROVE FIRST TIME QUALITY TO 85%
		EVELOP REPORTS			DEVELOP CLEC EVALUATION METHOD
UTILIZATION	DOCUMENTED 15 - 39% LABOR WASTED	EDUCE LOST TIME THROUGH TRAINING			TIE RE'S AND PERFORMANCE FACTORS TO FORCE SIZING MODELS
		ND SUPERVISORY INTERVENTION			TEST MAXIMUM CAPABILITY THROUGH HOPPER ORDERS.
AND	LACKS SYNERGY AND INTEGRATED	EFINE THE OBJECTIVES AND MEASURES			MONITOR ATTAINMENT TO GAINS IN PERFORMANCE.
EGIES	PLAN	ROVE SYNERGY SUPPORT & ERATIONS			MONITOR QUALITY AND SERVICE OBJECTIVES RESULTS

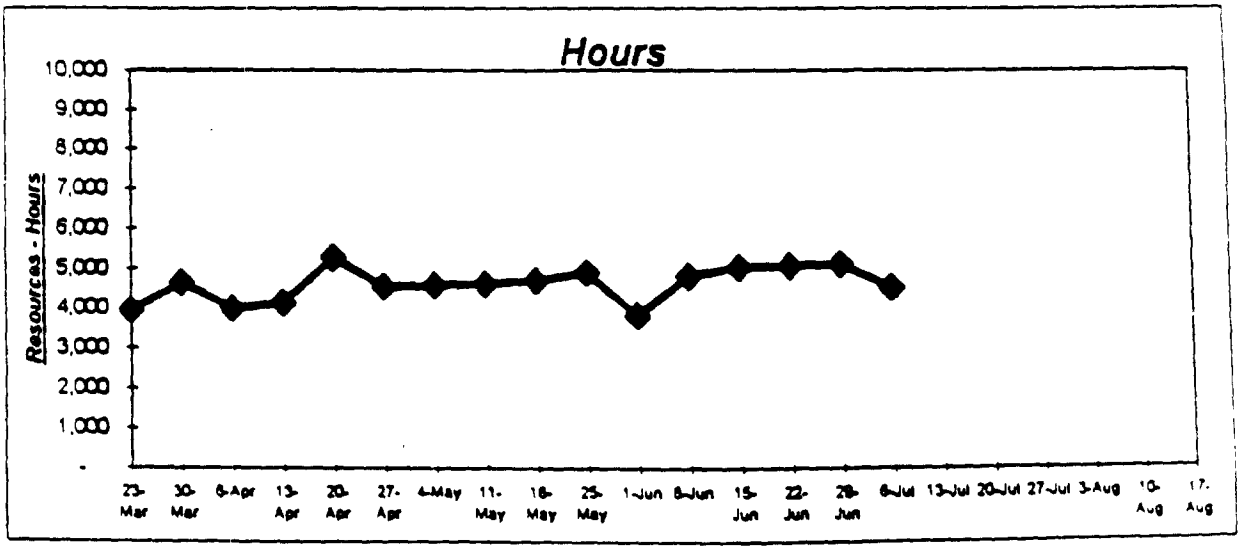
SUMMARY			
COMPLETE	100%	100%	0%
	0%	0%	0%
	0%	0%	0%

BellSouth
LCSC

Performance Trends



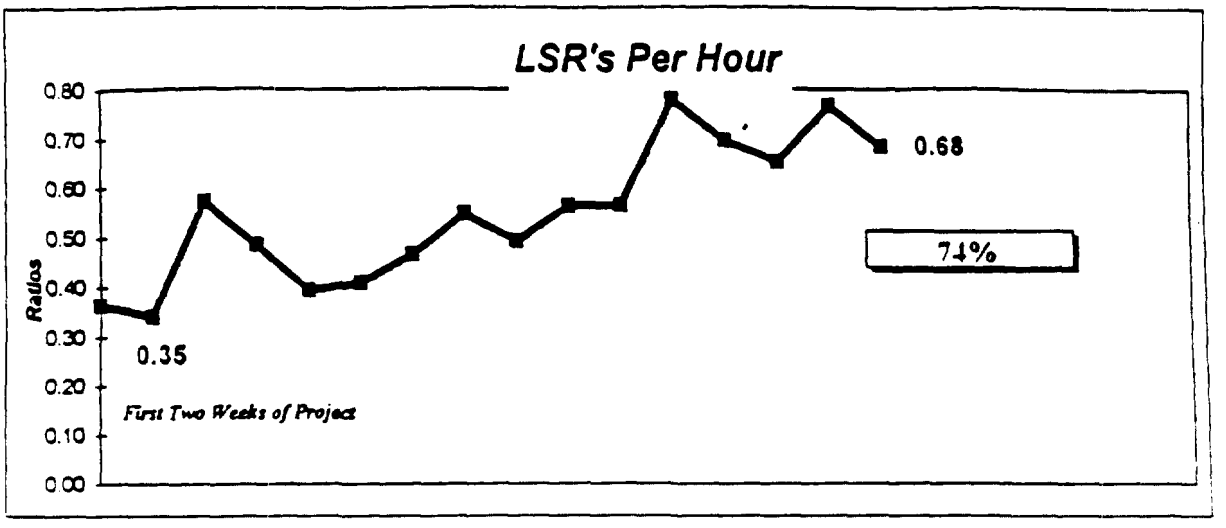


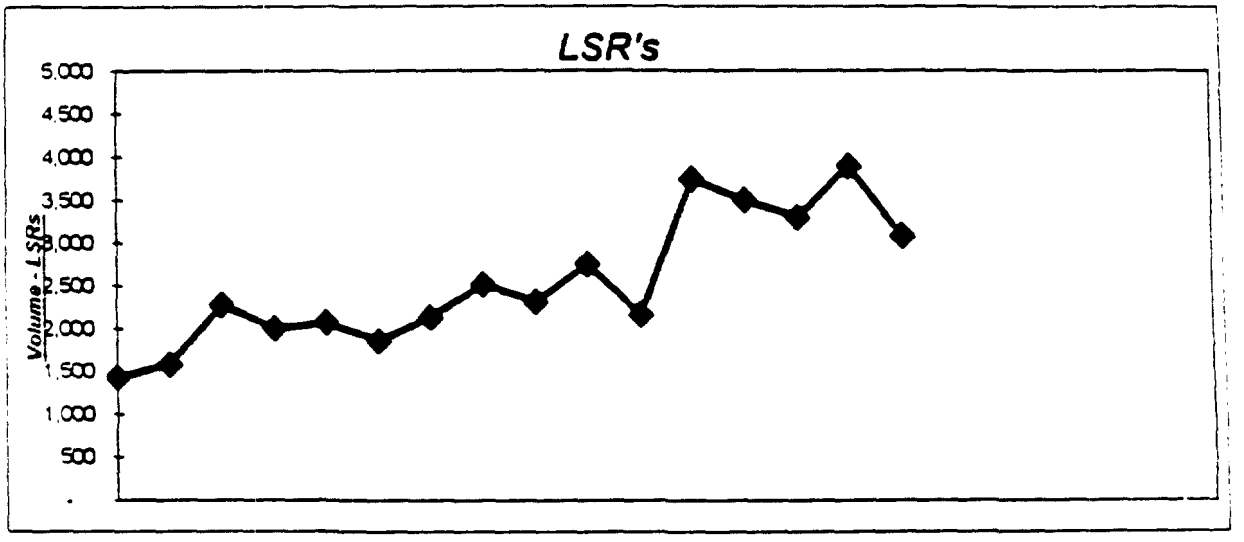


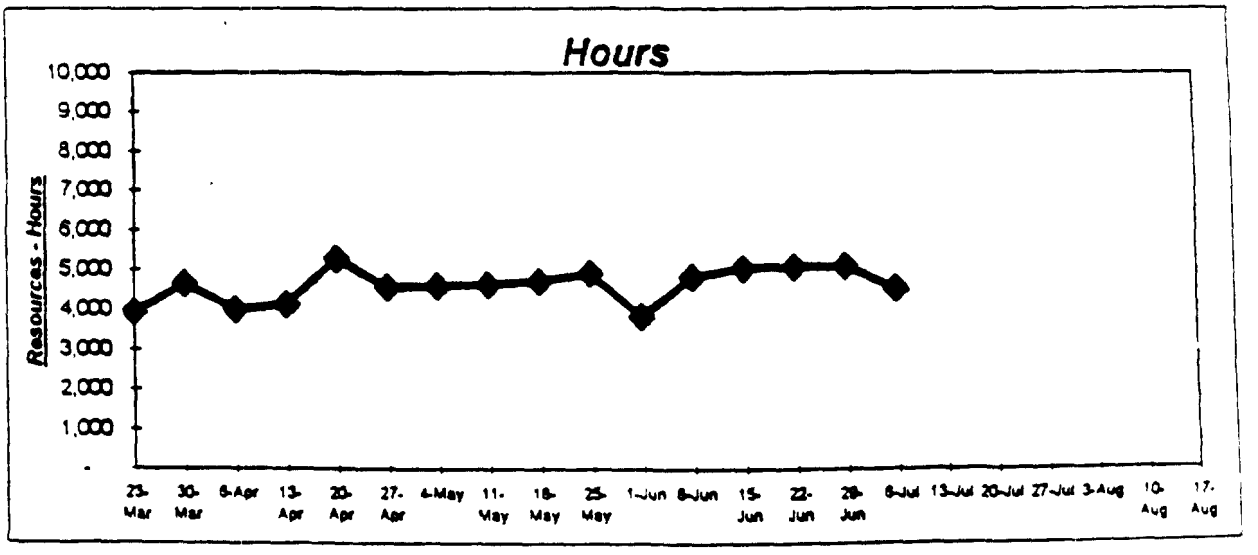
Source:

BellSouth
LCSC

Performance Trends







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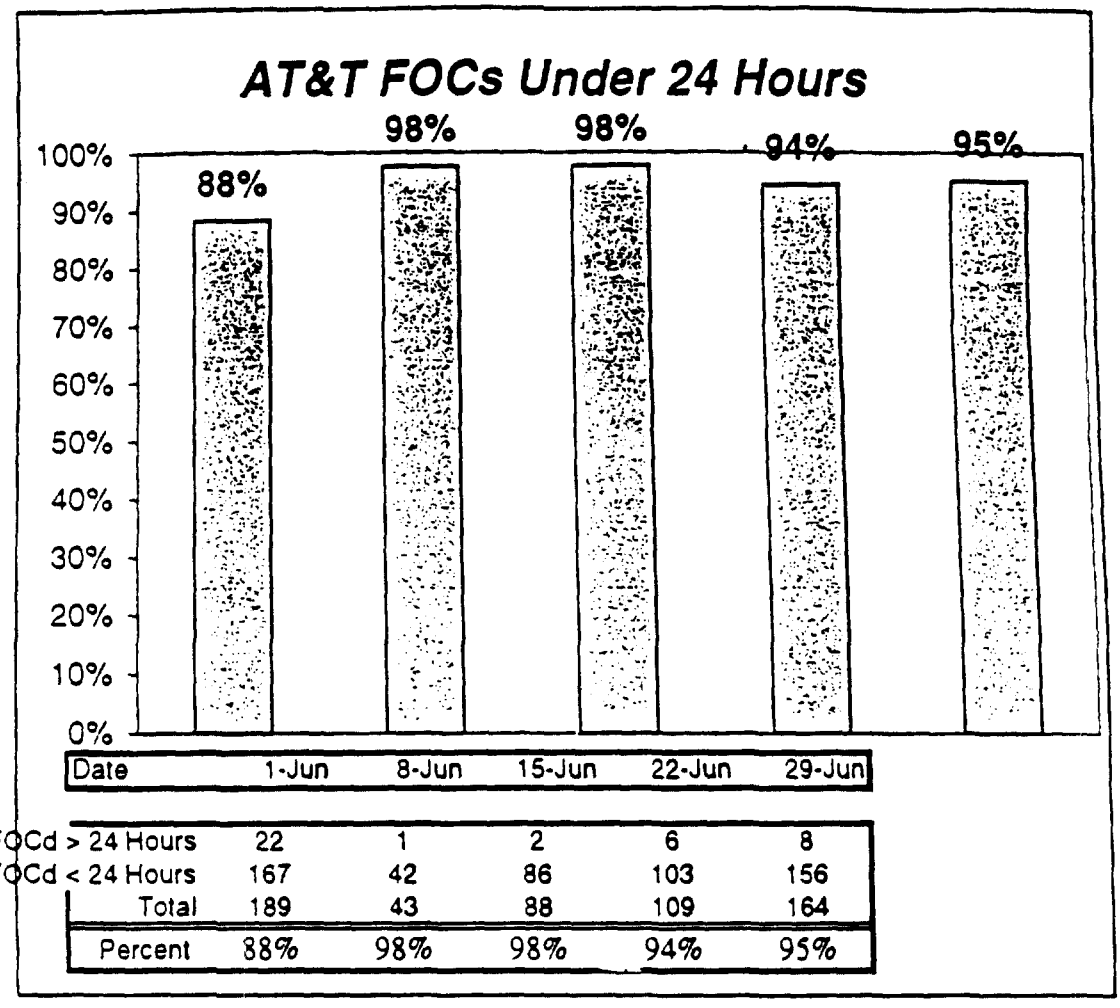
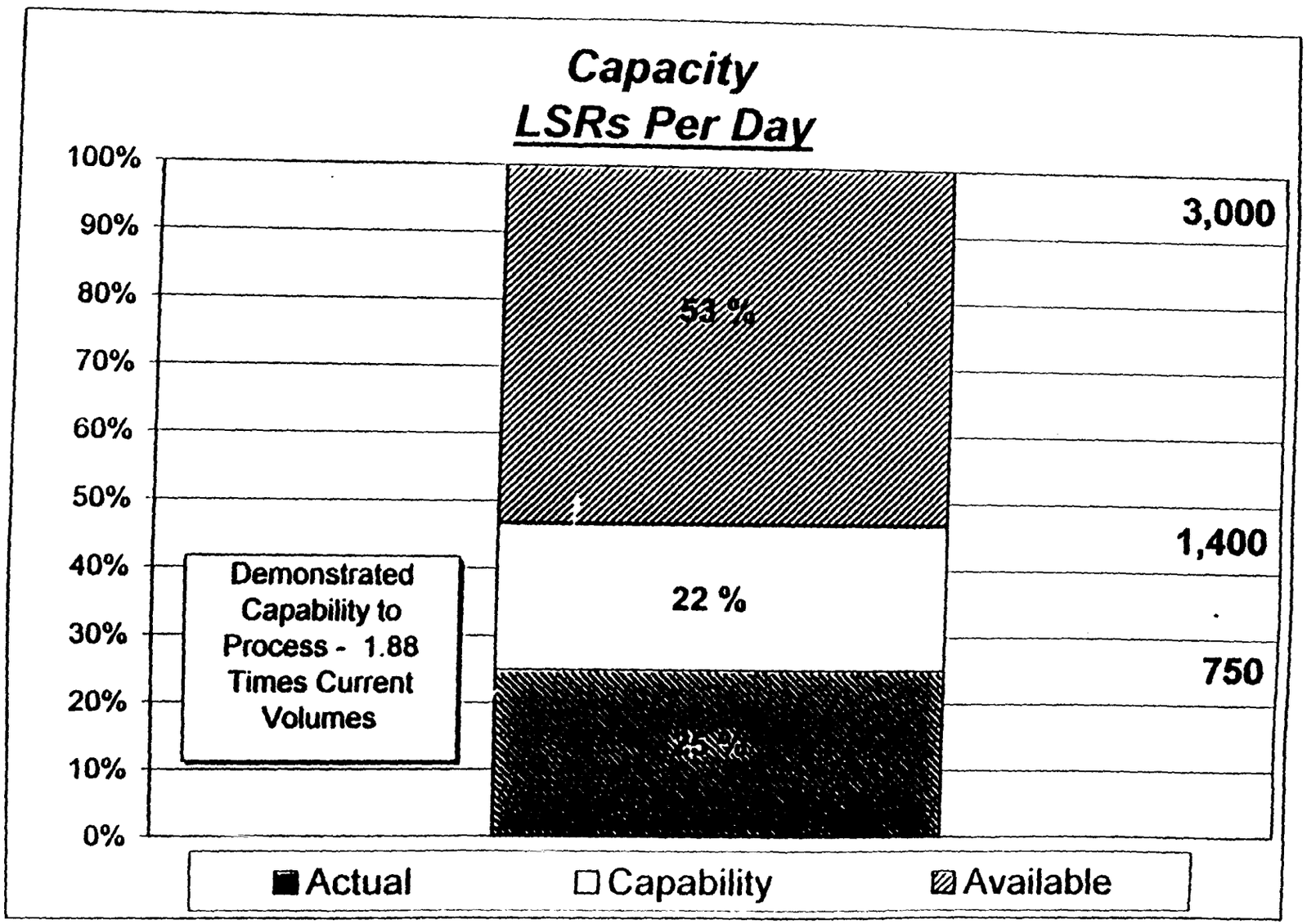
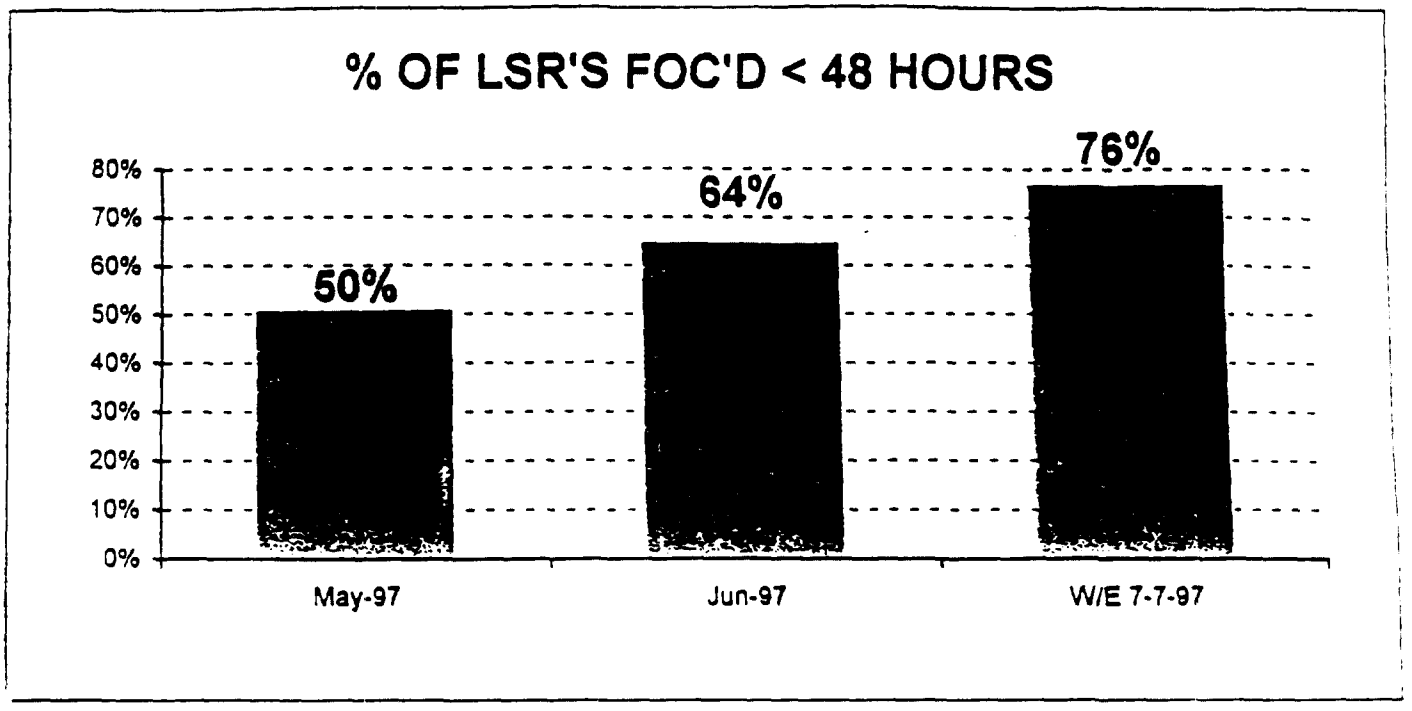
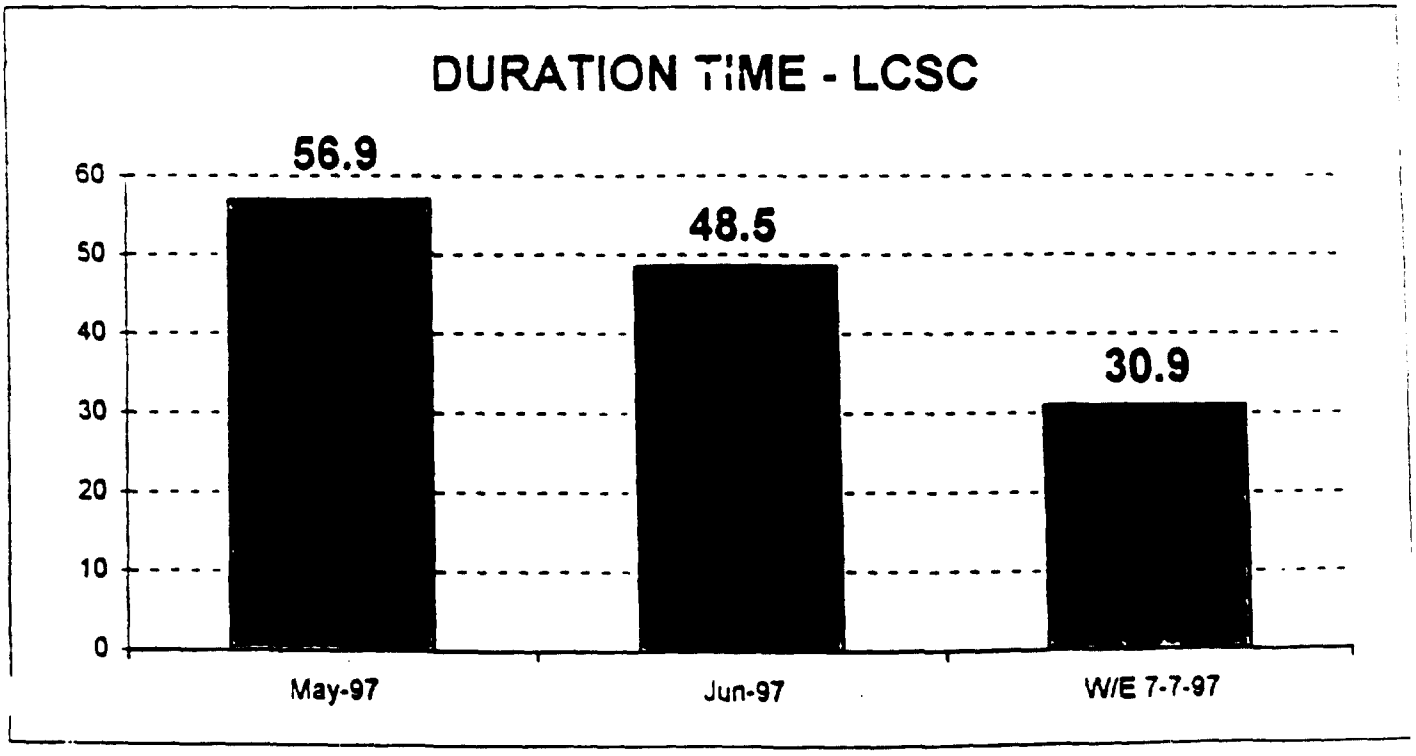


Date	1-Jun	8-Jun	15-Jun	22-Jun	29-Jun
FOCd > 24 Hours	22	1	2	6	8
FOCd < 24 Hours	167	42	86	103	156
Total	189	43	88	109	164
Percent	88%	98%	98%	94%	95%

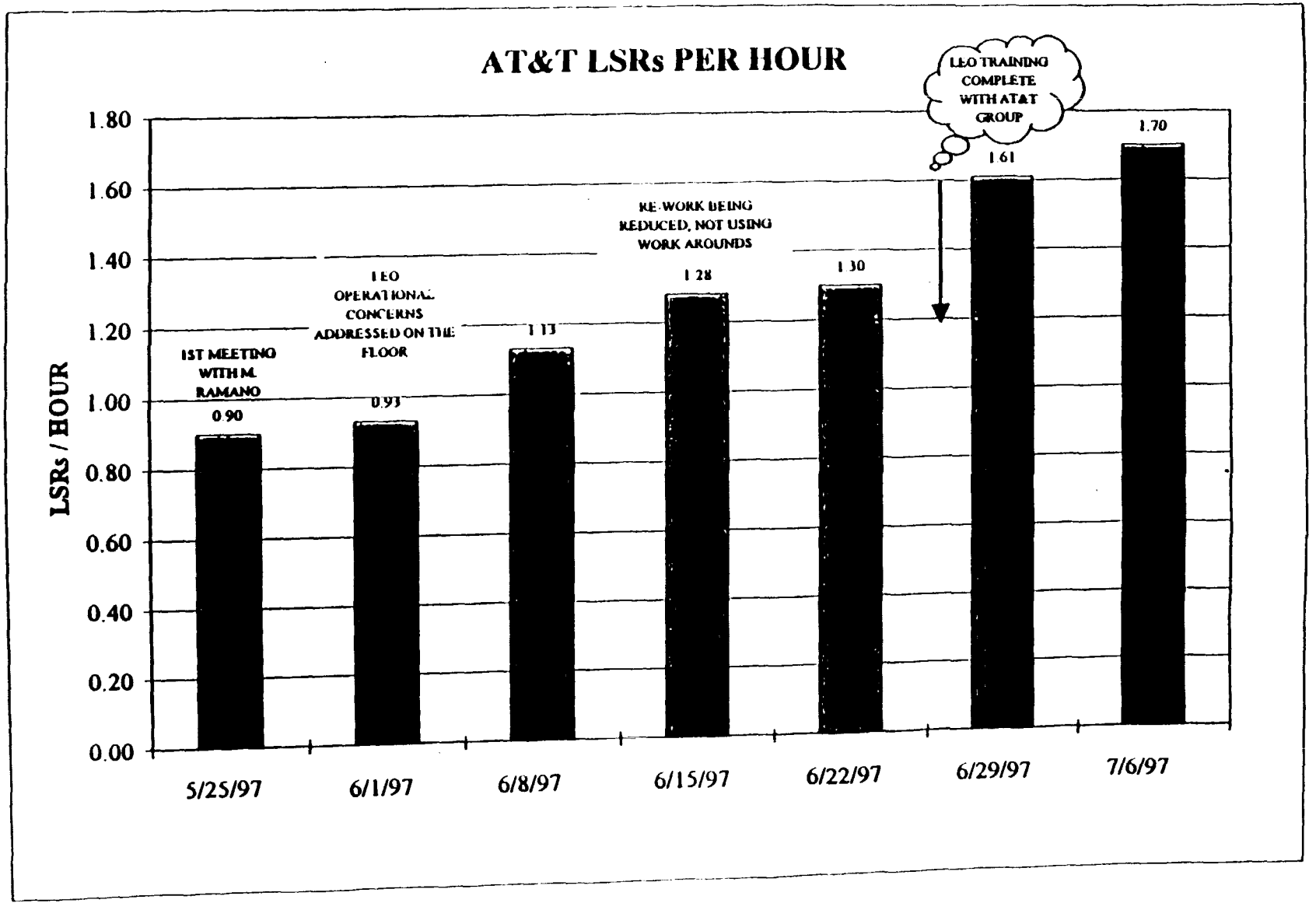

Capacity
LSRs Per Day
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
53 %
22 %
3,000
1,400
750
Demonstrated Capability to Process - 1.88 Times Current Volumes
Actual
Capability
Available

SERVICE INDICATORS





AS WE RESOLVE BARRIERS PRODUCTIVITY IMPROVES



EXECUTIVE UPDATE

PHASE III – ADJUST AND FOLLOW UP

Date: August 15, 1997

To: Krista Tillman, Operations Vice President
BellSouth, Interconnection Services

From: James LaRue, Chief of Operations
DeWolff, Boberg and Associates

Project #: 9706

Project: LCSC (Local Carrier Service Center)

- This project involves the LCSCs located in Birmingham, AL and Atlanta, GA, along with the service support groups located at the BellSouth Center Atlanta.

- The project was authorized for a 22-week period - to start March 17, 1997 and to finish August 15, 1997. This is the status report for the end of Phase III of the project.

- The purpose of this project is to accelerate Operational Readiness. Four key deliverables of this project include:

  - Detailed process flows that are validated, tested and measured.
  - Improved Training process that delivers qualified candidates.
  - Define Key Performance Indicators.
  - Enhance and install Management Operating System to effectively manage the Key Performance Indicators.

- The major benefits of this effort are:

  - Improved operational efficiency.
  - Enhanced service & quality to CLECs.
  - Assured Operational Readiness to meet end-of-year CLECs forecasts.
  - Significant ongoing expense reduction.

I. PROJECT PHASES

A. **Quick Results** - Weeks 1 through 7 – Phase I of the project focused on gaining control of the work and establishing the correct management behaviors / disciplines.

B. **Main Installation** - Weeks 8 through 15 – Phase II of the project focused on testing the capability of the group, and tightening the management routines/systems for controlling performance. Increasing capability towards theoretical capacity is inclusive of working at the right quality and providing competitive service at the appropriate cost. Theoretical capacity has been set using managers actual observations calculated to 3.98 LSRs per employee hour (30 per day/employee). Note; the theoretical capacity is based on the current volume mix and level of automation. "The Hopper" is a process that validates the center's capability by having a ready backlog of test orders to supplement the orders received. The concept of introducing test orders was developed and successfully installed and is currently being used to ensure operational capabilities are ahead of the customer requirements.

C. **Adjust and Follow Up** - Weeks 16 through 22 - Phase III of the project focus was to set new targets (raise the bar), incorporate new products, perpetuate performance, and make adjustments as required. Also, to continue to make progress in alleviating fundamental barriers that are not in BellSouth's control. The fundamental barriers are the lack of predictability of work volume input, and the lack of completeness (quality) in the orders received from CLECs. Therefore, the continued use of The Hopper will be needed until better forecast from the CLECs is available. Also, a process was developed to provide feedback to the CLECs about their level of incomplete/incorrect orders. LSRs with incomplete or erroneous information make it necessary to request for clarification thus increasing the processing time and amount of rework..

II. PROJECT UPDATE

We completed the 22nd week of the project on August 15th. Phase III is now complete. All but one of the scheduled items are completed (48 Key items). The remaining 1 activity in Phase III is in progress and expected to be completed within the next two weeks. For more detail, look at project phases in this write-up and in the attached "Summary of Findings and Approach."

There are three areas of concentration:

1. **Operations Organization** – Along with Bill Bolt, Tom Moran, and Bill Thrasher we are developing the LCSC's management to increase the control of the work by having the managers internalize an employee follow-up routine. This will enable the managers to shift work where required, identify operating opportunities, maintain volumes, production numbers, backlog status, current employee skills, quality and service levels, and department capability.

2. **Support Organization** – Along with Eddie English and Diane Cheng we are developing the support organizations to continue to increase synergy with operations by aligning the organizations under singular measurable goals.

3. **Training and Development** - We are developing a new training organization that is responsible for the employee's continuous development process. There are shared responsibilities between the support and operating organizations for the management of the process. However, key employees responsible for continuous development will report directly to the heads of LCSC's operations and support. This enhancement in training is geared to further accelerate the preparation and delivery of training material, developing/installing/testing material covered in training, updating the content of the presentation as enhancements to products are made, and dramatically shortening the total learning cycle for all employees.

II. Operations Organization – Write up of key details:

A. Improved Control of the Work

Phase I, (Quick Results)

- Process Flows were developed to define the proper methods to process work and Backlog Controls were installed to understand and control work volume levels.

Phase II, (Main Installation)

- Process flows were validated and tested to ensure quality and accurate processing. In addition, work instructions were prepared which provide step by step instructions for order processing.
- Backlog Controls were enhanced to measure Service, Quality and Cost. Cost factor is measured as LSRs / Hour. Quality is measured by two methods: Percent First Time Quality and Service Orders pending on the Questionable Activity Report. Service indicators are measured by the gross cycle time of an LSR and the speed in which Service representatives answer the phone. A Director's Report has been installed that summarizes the key operating indices which are reviewed daily by the Center Directors.
- The Order Tracking System has been enhanced to provide greater definition to the types of LSRs being processed and the reasons that LSRs are going to clarification. The Order Tracking System is also providing data on processing duration and clarification duration.

Phase III, (Adjust and Follow up)

- A Procedures Manual was prepared documenting the system procedures utilized in LCSC. This manual defines the responsibilities and procedures for each step in the management of backlogs, quality, service and productivity. Copies of this manual will be provided to each director and the master will be given to the A.V.P.
- Another manual was prepared which contains the processing work instructions and process flows. This manual was given to the Training Coordinator, Carolyn Davis. A copy will be prepared for the LCSC Performance Manager, Judy Norris. Judy has been trained in the development of process flows and will be responsible for the maintenance of this manual.
- A CLEC evaluation was developed that tracks the percentage of clarifications, cancellations and duplications received from each CLEC. This data is pulled weekly from the LON order tracking system and presented to the Customer Support Managers. They will be responsible for working with the CLEC to correct these issues.
- Compliance Audits were created to follow up on the compliance to and utilization of LCSC management disciplines.

B. Management Behavior / Disciplines

Phase I, (Quick Results)

- Management Roles and Responsibilities were defined and work area layouts were designed.

Phase II, (Main Installation)

- The percent of time that the Managers spend with the team members increased from 12%, as measured during the Analysis; to 30% at the end of Phase I, to about 65%. This increased supervision improved first time quality and service demonstrated by a reduction in escalations by as much as ½ at the AVP level.
- A Continuous Development Process was developed to highlight and address employee training and/or skill deficiencies.
- New floor layouts were implemented into the 14th floor, in Birmingham. In Atlanta, a new work area layout was implemented for some employees, the remainder are awaiting a decision about a possible relocation of the operation.

Phase III, (Adjust and Follow up)

- The managers continue to utilize about 65% of their time supervising their people. This is an appropriate percentage of supervision.
- A work simulation of basic single line resale, (disconnect, new connect, switch "AS IS", and switch with changes) was administered to all LCSC personnel. The Hopper was utilized to perform this work simulation. Service representatives that performed below the expectation of error free processing received additional training and/or coaching.
- A Continuous Development Process was developed utilizing the Hopper as a work simulator. The work simulation enables management to evaluate two aspects of the service representative capabilities, quality and efficiency. Deficiencies in either of these areas would initiate a Performance Improvement Plan. This is the item that is still in process. Each service representative needs to go through the work simulation process for the types of orders that their team process. Based upon that work simulation Performance Improvement Plans should be initiated.
- Teams were initiated. Managers received training on the characteristics that constitute a team vs. a group. Each Team is installing communication boards which include the definition of the teams objectives with respect to quality service and productivity. Each day the Team Leader, (the manager) posts the actual performance for the previous day and has a brief team meeting.

C. Quality, Service and Labor Utilization

In Phase I, (Quick Results)

- The Hopper was developed, preliminary work estimates were developed and an approach to measure quality and service was established.

Phase II, (Main Installation)

- The Hopper was installed and is being used as a work simulation to evaluate Service Representative performance (Quality and Productivity) capabilities, and as a supplement to the workload to enable the managers to meet performance expectations.
- Work to Time Relationships (RE's) were established for each activity that the LCSC currently performs.
- Quality measures were established to measure each Service Representative.
- Service measures were established.
- Productivity improved 74% since first two weeks of Project, as measured in LSRs processed per hour.
- When measured by SOCS orders generated, the Productivity improvement was 94%.

Phase III, (Adjust and Follow up)

- The programming for the First Time Quality (FTQ) reporting is complete. Ron Moore will train managers this week and utilization by the managers is scheduled next week.
- Processing duration time has been reduced from 56.9 hours in May to 31.5 hours the first two weeks of August. This represents a 45% reduction. (see graph of LCSC Duration Time).
- The percentage of LSR's processed within 48 hours improved 58%. In May the percentage was 50%, the first two weeks of August the percentage is 79%. (see graph of LSR's FOC'D < 48 HOURS).
- Productivity has improved an additional 86% since completion of Phase II. Total productivity improvement is 160%, as measured in LSR's per hour. (see three part graph LSR's Per Hour).
- Productivity improved 140% when measured by SOC's orders per hour. (see three part graph SOC'S Per Hour).

IV Support Organization

A. Force Sizing / Forecast Feedback Loop

In Phase I, (Quick Results)

- An activity based force-sizing model was developed.

Phase II, (Main Installation)

- Defined and began tracking key forecast indicators by Resale, UNE and Complex.
- Changes made to Order Tracking System to provide more definition to types of LSRs being processed.

Phase III, (Adjust and Follow up)

- Developed Force Sizing model that incorporates performance to R.E.'s (reasonable expectations).

B. Project Schedule

In Phase I, (Quick Results)

- Defined what a Project Schedule should be, developed format and defined Key events.

Phase II, (Main Installation)

- Project Schedule developed with appropriate level of detailed activities to focus the actions of the support organization and better insure they are working on the appropriate items.
- Structured weekly staff meetings were installed with status reports. It also gives them the ability to get assistance on items that may be in danger of missing scheduled due dates.

Phase III, (Adjust and Follow up)

- Weekly staff meetings to assess project status have continued.

C. Capabilities

In Phase I, (Quick Results)

- The Hopper concept was developed to enable artificial work to be input in order to test capabilities.

Phase II, (Main Installation)

- The Hopper was installed into the LCSC operations and has provided the ability to not only tests the departmental theoretical capabilities but also the individual Service Representative capabilities.
- Staffing and demonstrated performance placed the LCSC capabilities at 1590 LSRs per day considering training, vacations and absenteeism.
- LSR volume was at 742 per day (June Average), of which 10% were Hopper orders.

Phase III, (Adjust and Follow up)

- Current demonstrated capabilities stand at 1625 LSR's per day considering 23% for training, vacations and absenteeism (see Capacity / Capabilities Chart).
- LSR volume is 1195 per day the first two weeks of August. 17% of this volume is Hopper orders. The LCSC should be capable of absorbing 42% more volume with no impact on service or quality. The additional staffing of 50 service representatives would increase this capability to about 100%.

V. Training and Development

A. Selection & Screening Process

Phase I, (Quick Results)

- Definition of skill requirements was defined and appropriate testing determined and installed to screen for these entry-level skills.

Phase II, (Main Installation)

- The expectations of a functional Service Representative were defined. A site visit for all new LCSC candidates will include a review of performance expectations (Quality and Efficiency).

Phase III, (Adjust and Follow up)

- On site visits will be hosted by the Performance Manager, Judy Norris.

B. Content of course material and testing

Phase I, (Quick Results)

- Developed comprehension tests to validate learning process and instituted some changes in the delivery and content of course material.

Phase II, (Main Installation)

- Developed work simulation evaluation using the Hopper to appraise Service Representative's capabilities (Quality and Efficiency).
- Created Modular Training agenda for Single Line Resale (DOE) that will reduce training time from six weeks to two weeks. For a few who do not pass the work simulation, there will be a follow up instruction for three days.
- All the modules have comprehension testing. The comprehension testing will be administered prior to the training and after the module has been delivered.
- LEO training module developed and delivered to increase capacity of LCSC to handle AT&T volume received through LEO.

Phase III, (Adjust and Follow up)

- Developed and delivered LENS training to 14 part time temps in Atlanta. This approach to inputting LSR's to LEO that are received for manual processing drastically reduces the training time to 8 hours and provides an excellent reserve capability.
- Developed training modules for Resale
    - Single Line DOE
    - Single Line SONGS
    - Multiline DOE & SONGS
    - Belinda Miller, (trainer) used the SONGS training materials in her most recent training class.
- Training modules for Unbundled Network Elements and Complex Services still require development.

LLSOUTH - LCSC
ANTA, GA

STATUS GREEN - COMPLETED
- IN PROGRESS
RED - IN PROGRESS

SUMMARY OF FINDINGS AND APPROACH

e Updated August 15 1997 Week 22 of 22

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LOYEE SKILLS	INCOMPLETE TRAINING DELIVERY & CONTENT LACKS ON THE FLOOR SUPPORT AND EVALUATION	FILL THE GAPS IN TRAINING DELIVER FUNCTIONAL REPS			
AGEMENT VIOR	LACKS STRUCTURED PARTICIPATION	DEVELOP BEHAVIOR MODEL EVALUATE AND INSTALL			INSTALL CONTINUOUS DEVELOPMENT PROGRAM
AGEMENT UDES	PASSIVE IN ASSIGNMENT / FOLLOW UP	PROACTIVE ENGAGEMENT			
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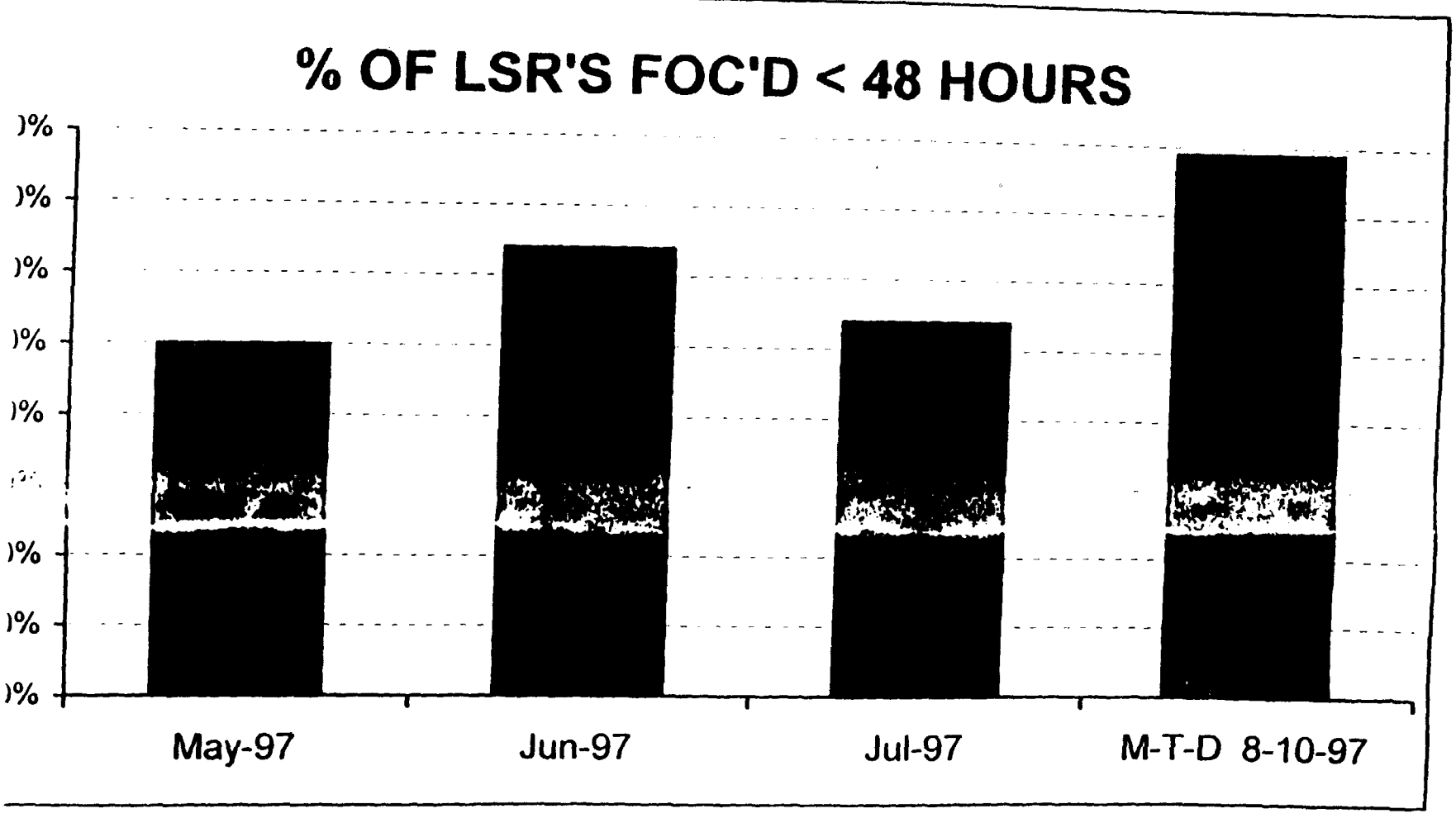
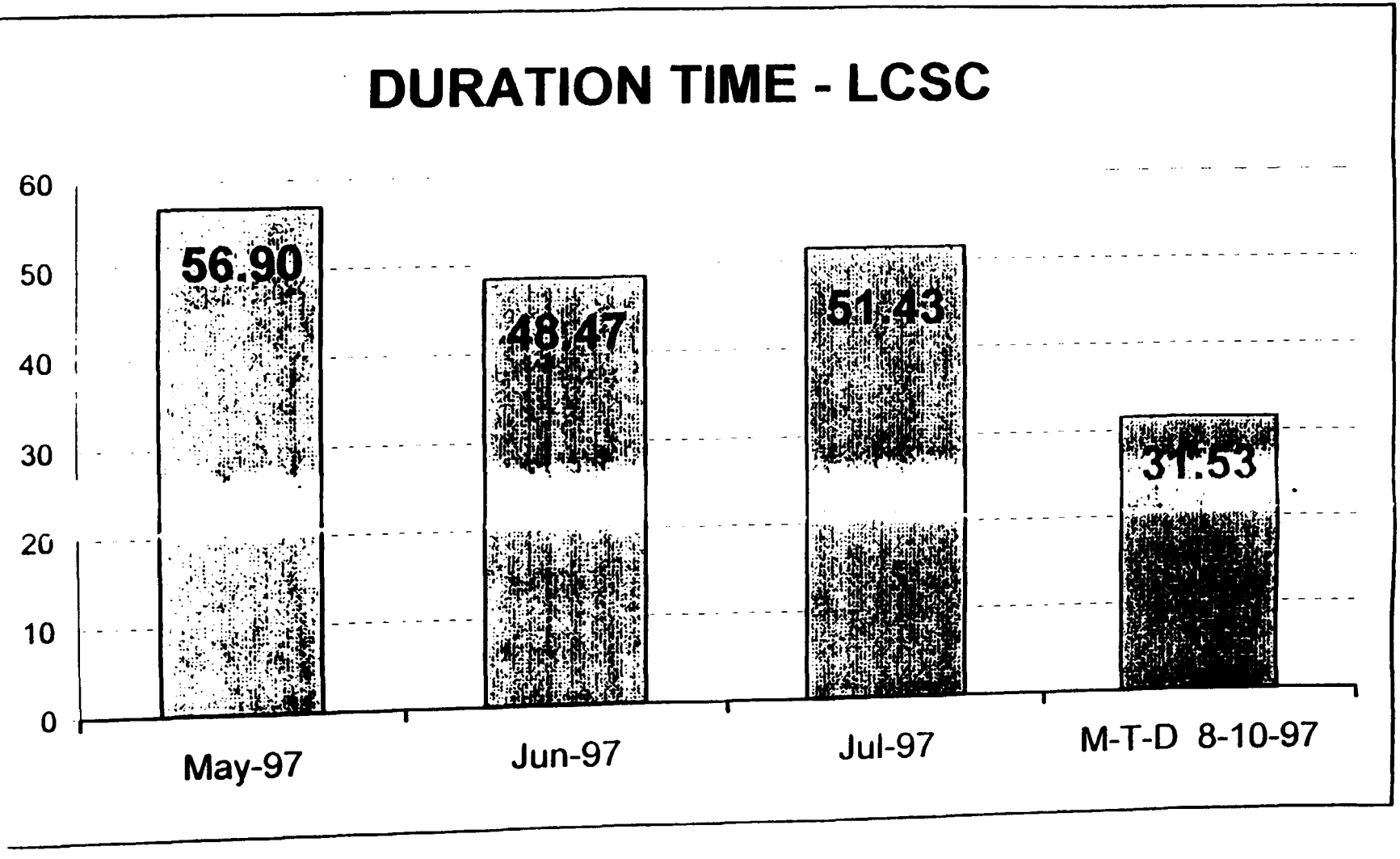
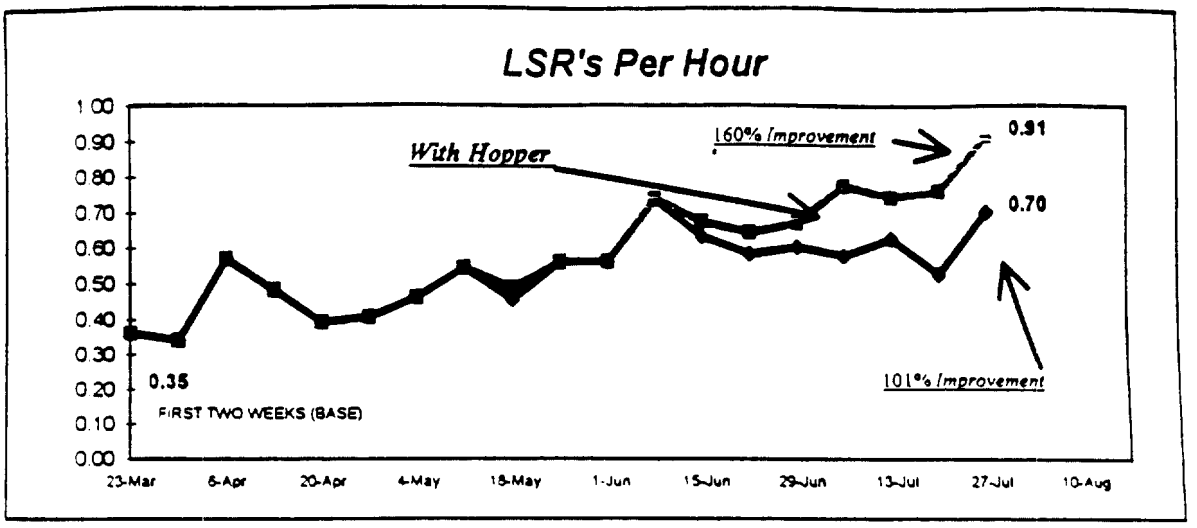
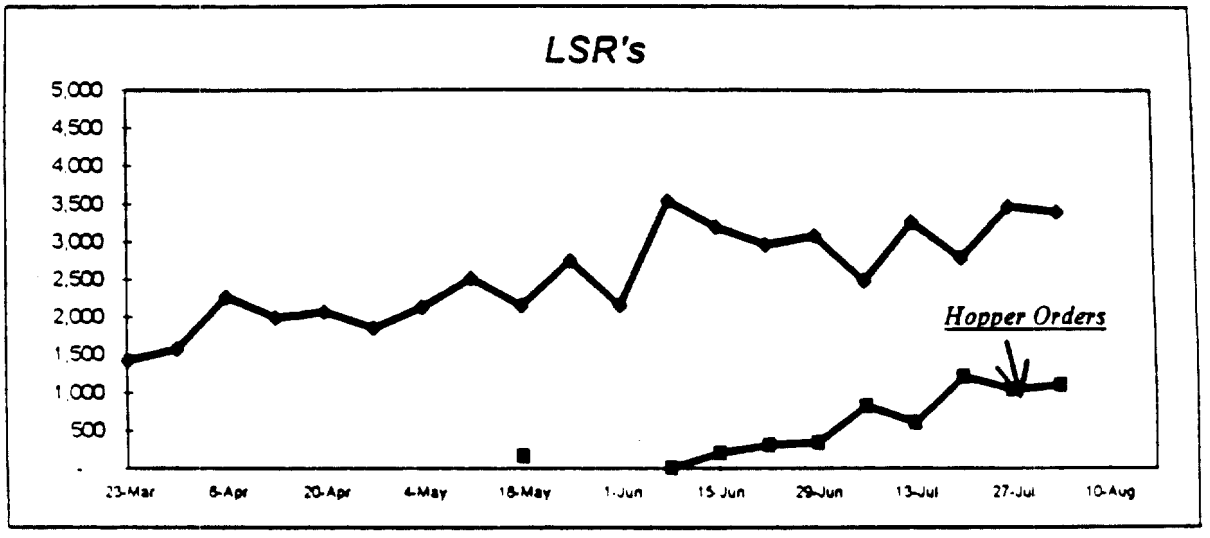
	SUMMARY		
COMPLETE	100%	100%	94%

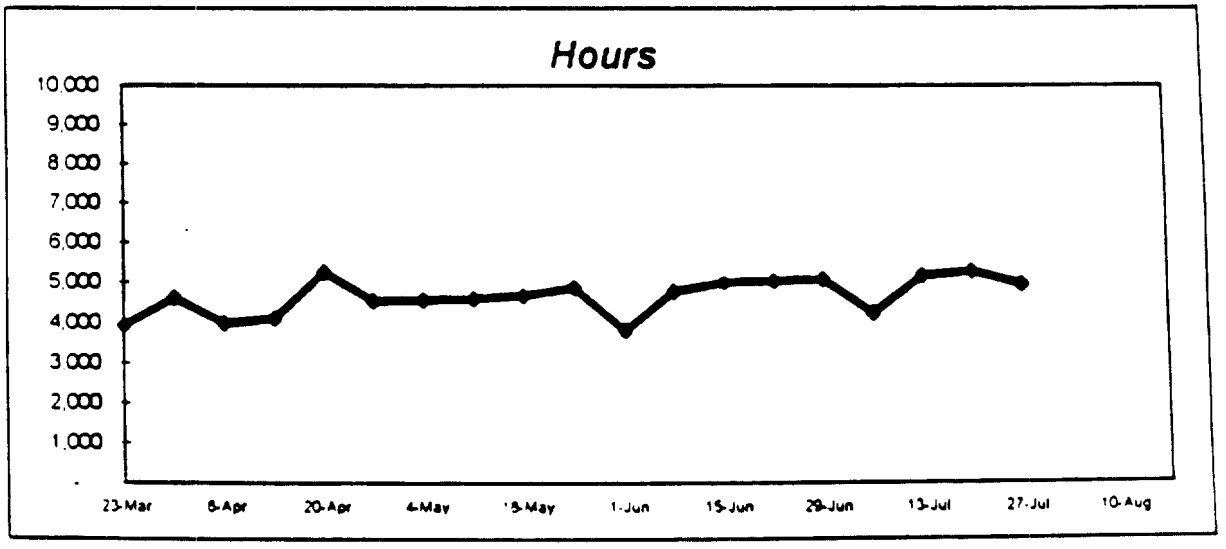

% OF LSR'S FOC'D < 48 HOURS
)%
)%
)%
)%
)%
)%
)%
May-97
Jun-97
Jul-97
M-T-D 8-10-97


DURATION TIME - LCSC
60
50
40
30
20
10
0
56.90
48.47
51.43
31.53
May-97
Jun-97
Jul-97
M-T-D 8-10-97

BellSouth
LCSC

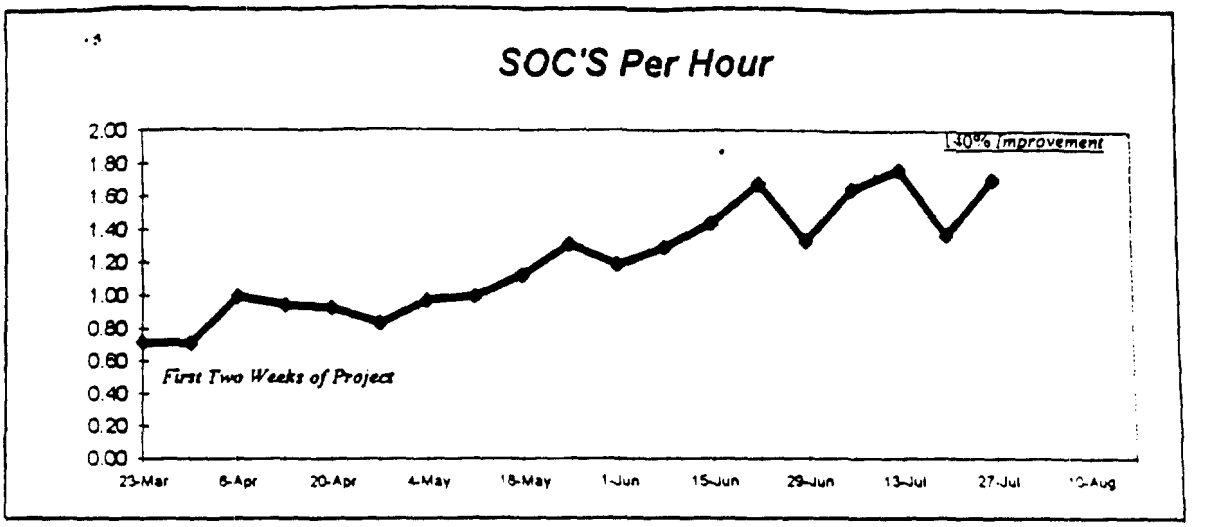


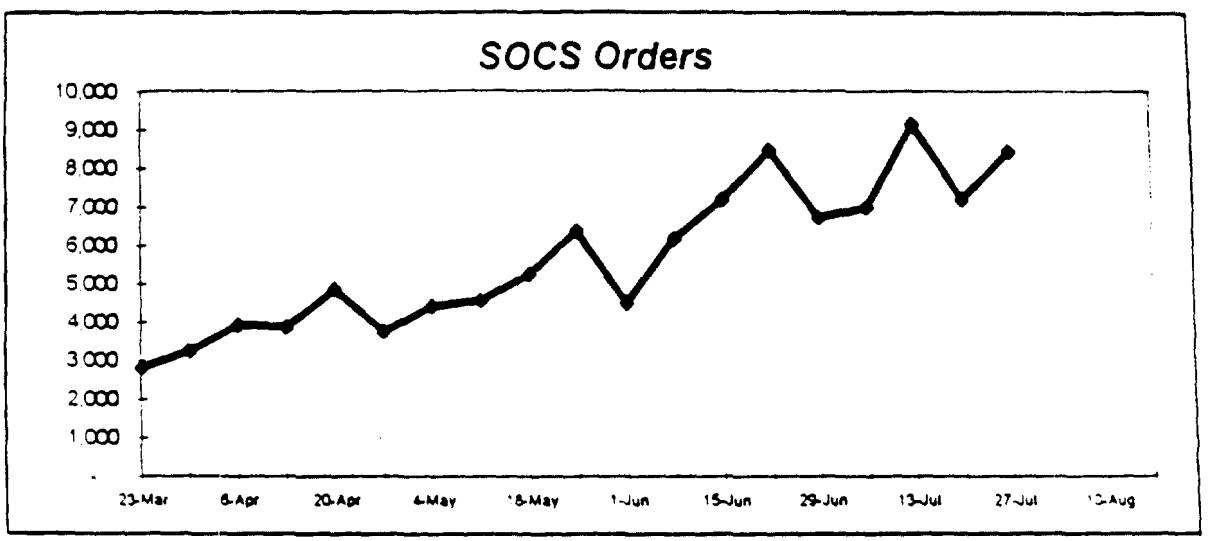


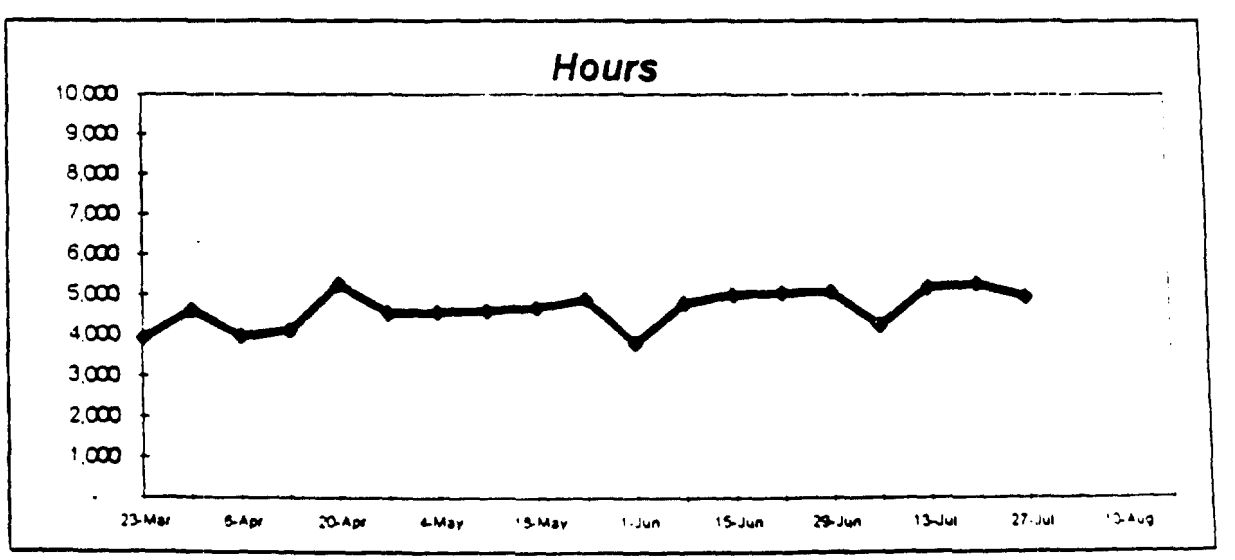


Source
LSR's - LON Report from Ron Moore

BellSouth
LCSC







Source
LSR's - LON Report from Ron Moore

CAPACITY / CAPABILITY

ITEM	BIRMINGHAM	ATLANTA	TOTAL LCSC
SERVICE REPS	79	63	142
HOURS / DAY	7.5	7.5	7.5
HOURS AVAILABLE	592.5	472.5	1065
%TRAIN,VAC ABS	23%	23%	23%
NET HOURS AVAIL	456	364	820
LSR'S/HR CAPACITY	3.46	4.80	4.05
LSR'S/HR DEMO	1.84	2.16	1.98
DAILY VOL CAPACITY	1578	1747	3325
DAILY VOL CAPABILITY	839	786	1625
PERCENT OF CAPACITY	53%	45%	49%

DeWolff, Boberg & Associates, Inc.
Resources to management for improving performance

P.O. Box 21989 • Charleston, South Carolina 29413-1989 • 1-(800)-800-6030

Krista Tillman
Operations Vice President
BellSouth, Interconnection Services
675 West Peachtree Street
Atlanta, GA 30375

September 15, 1997

Re: BellSouth Telecommunications, Inc. LCSC Project

Dear Ms. Tillman:

We concluded the project on August 15, 1997. Through the joint efforts of BellSouth and DeWolff, Boberg and Associates, objectives of the project were met and, indeed, the expected results were exceeded. Our objective was to assist your organization in accelerating the Operational Readiness of the LCSC centers in Atlanta, Georgia and Birmingham, Alabama. During our Analysis in March, four deliverables were identified as key areas of development focus:

- Detailed process flows that are validated, tested and measured.
- Improved training process that delivers qualified candidates.
- Define Key Performance Indicators.
- Enhance and install Management Operating System to effectively manage the Key Performance Indicators.

With Eddie English, Senior Director, Bill Bolt, AVP, and their staffs, these deliverables have been developed and installed. The centers are operational and ready to handle your customer's request for service. The result of the installations made were measured and compared to the analysis period. Tangible improvements have been attained in Service, Productivity and Quality. For example the numbers of LSRs processed within forty-eight hours improved 79%, processing time was reduced by 45%, and overall productivity increased 160%. Other measurements such as first time quality were installed and they will serve as benchmarks for a continued improvement process.

We have enjoyed working with your organization in this successful project, and we are ready to assist you with any other opportunities in the future.

Sincerely yours,
DeWolff, Boberg and Associates

James LaRue
Chief of Operations